SURVEY HARBOR OF BLACK ROCK.

LETTER

FROM

THE SECRETARY OF WAR.

TRANSMITTING A REPORT OF

THE SURVEY OF THE HARBOR OF BLACK ROUK,

IN THE

STATE OF CONNECTICUT.

JANUARY 10, 1828. Referred to the Committee on Commerce:

WASHINGTON .

PRINTED BY GALES & SEATON.

1828.

WAR DEPARTMENT,
Washington City, January 9, 1828,

SIR: I have the honor to transmit, herewith, a report of the Chief Engineer of this date, accompanied by a report and plan of the survey of the Harbor of Black Rock, in the State of Connecticut, which were called for by a resolution of the House of Representatives, of the 4th Instant.

I have the honor to be,

Very respectfully,

Your obedient servant,

JAMES BARBOUR.

Hon. Andrew Stevenson,
Speaker of the House of Representatives.

ENGINEER DEPARTMENT,

Washington City, January 9, 1828.

SIR: In compliance with your orders, I have the honor to transmit, herewith, copies of the report and plan of the survey of the Harbor of Black Rock, in the State of Connecticut, which contain the information called for by the resolution of the House of Representatives of the 4th inst.

I have the honor to be, Very respectfully, Your obedient servant,

> ALEX. MACOMB, Maj. Gen. Chief Eng.

Mon. James Barbour,
Secretary of War

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February, 1827.

SIR: In obedience to your orders of the 6th of February, 1827, directing me "to examine, and, if necessary, to make a survey of the Harbor of Black Rock, for the purpose of ascertaining the expediency of erecting a beacon on a certain ledge of rocks lying near its mouth," and directing me, also, "to furnish an estimate of the expense of erecting the beacon," I have made the examination and survey required, and have now the honor of making the following report on the same: In making this survey, I commenced by selecting such positions on the shore of the Island as would command a view of all the objects required to be noticed, from which I took their bearings, and ascertained their relative situation, by triangulation, I ascertained the length and width of the Rock (called the Old Huncher, or Spindle Rock) by actual measurement, and its depth, by taking the soundings immediately around its edges, as I did of those rocks in its vicinity, and detached from it; ascertained their location, as well as that of the Cows, (all which are covered at half tide,) by anchoring my boat, and hoisting flags directly over them, when their bearings were taken from the shore, from which survey the chart accompanying this has been drawn. The water around the Rock upon which the beacon ought to be erected, varies but little in depth, from two fathoms, at the distance of from sixty to seventy feet from it, and the bottom is composed of loose rock, small stone, and gravel. The mean rise and fall of the tide at this place is about eight feet: this will give twenty feet, from the base of the foundation, for the beacon, to the top, or the high water line, the diameter of which I will suppose to be twenty-four feet at top, then with a slope of two horizontal to one foot perpendicular; the base will be 104 feet, the solid contents of which will be 89,472.77 cubic feet; but 863.96 cubic feet the solid contents of the Rock, is to be deducted, which will leave \$8,608.81 cubic feet. the solid contents of the rough stone work. These stone (as stated to me by the memorialists) will have to be brought from the Norwalk Islands, a distance of twelve miles, and will cost at the rate of seventyfive cents per load, (as it is termed,) of twelve cubic feet, when placed upon the foundation, = 5,538 dollars. I will suppose the diameter of the beacon to be built upon this foundation, sixteen feet at the base, and the diameter at the top to be eight feet, and ten feet high: the solid contents will be 3,769.92 cubic feet; the height of hemispherical top, four feet; solid contents, 134 cubic feet. The solid contents of the whole beacon, at three dollars per perch, will amount to 473.20 dollars. This, added to 5,538 dollars, gives 6,001.20 dollars, to which may be added, for bolts, lime, staff, or pole, and other contingencies, 200 dollars, making, in all, the sum of 6,201,20 dol-

lars. It is thought that a foundation of dimensions less than those proposed, would not be of sufficient strength to resist the force of the waves and ice, exposed, as this work must be, to both, from almost every direction. To construct a foundation of other materials than stone, or to secure the stone work with timber, might contract the dimensions, and consequently diminish expense; but the durability of the structure would be only temporary, as the wood work would soon be destroyed by the worms. As to the expediency of erecting a beacon at the place proposed, no doubt can remain on the subject, not only of its expediency, but of its absolute necessity, for the safe navigation of vessels passing the Sound, and being obliged to make this harbor in a storm. Frequent and very serious accidents have occurred in consequence of navigators not being able, in a storm, to ascertain the exact location of the Rock and the Cows; and for fear of getting too near them, have run their vessels on the Point Rock, or on to the Shoal between it and the point of the Island, and have been thus wrecked; whereas, had there been any mark to distinguish where the rocks lay, no accident need have occurred. When we take into view the great utility of a beacon at this place, it will be perceived, that it will not be of a local nature, but all who navigate the waters of the Sound may be benefitted by it.

> I have the honor to be, Very respectfully, sir, Your obedient servant,

> > JOHN ANDERSON, Bt. Lt. Col. U. S. Top. Eng's.

To Maj. Gen. MACOMB, Chief Eng. Comd's the Dept.